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W-13
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CLIENT Xcel Energy PROJECT NAME Comanche Station
PROJECT NUMBER 10217175 PROJECT LOCATION Pueblo, CO
DATE STARTED 12/10/20 08:15 COMPLETED 12/10/20 12:00 WELL LOCATION 558722.5789 N 2266105.628 E
DRILLING CONTRACTOR Dakota Drilling GROUND ELEVATION 4801 ft HOLE DIAMETER 8
DRILLING METHOD HSA/NX/AR GROUND WATER LEVELS:
LOGGED BY E. Munoz CHECKED BY _____ AFTER DRILLING ---
NOTES New, XYZ estimated pending survey

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0							Casing Type: 2-in PVC
	AU			ML		1.0 SILT (ML), yellowish brown (10YR 5/4), soft, non plastic, dry, with fine sand, trace coarse sand and subrounded fine gravel, rootlets (Topsoil)	
5				ML		SILT (ML), light yellowish brown (10YR 6/4), soft, non plastic, dry, some fine sand 7-8.5ft (Loess) (W-13-4-5)	
	CC	30					
10				SW		8.5 WELL GRADED SAND WITH GRAVEL (SW), reddish brown (5YR 5/4), loose, moist, fine to coarse grained, subrounded to rounded, gravel up to 2in, 1in lens of caliche-cemented alluvium at 17ft (Alluvium) (W-13-10-11)	Bentonite Chips
15	CC	20					
	CC	33		CL		17.0 SILTY LEAN CLAY (CL), yellowish brown (10YR 5/6) to dark yellowish brown (10YR 4/4), stiff to very stiff, low plasticity, moist, relict shale structure, shaly component increases with depth, lenses of fat clay 21.5-22ft (Colluvium)	
20							
	CC	80				23.0 SHALE, black (10YR 2/1) with yellowish brown (10YR 5/4) clays and brownish yellow (10YR 6/8) iron staining, highly weathered, weak, clayey, moist to wet at 25ft, fractured, gypsum present (Weathered Shale) (W-13-23-25)	
25							
	NX	63				27.5 SHALE, black (7.5YR 2.5/1), slightly weathered, strong, moist, some clays and iron staining along bedding planes, no high angle fractures, gypsum present (Weathered Shale)	10/20 Silica Sand 0.010-in Slot
30						29.0 SHALE, black (10YR 2.5/1), unweathered, strong, moist, unfractured (except coring-induced) (Unweathered Shale)	
	NX	100					Bentonite Pellets
35						34.0	

Bottom of borehole at 39.0 feet.